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Benigni et al.

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(54) **STORAGE BOX HAVING INTEGRAL LID WITH CLOSURE FLAPS**

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B65D 5/36	(2006.01)
B65D 5/468	(2006.01)
B65D 5/66	(2006.01)

(52) **U.S. Cl.**

CPC ***B65D 5/4208*** (2013.01); ***B65D 5/3621*** (2013.01); ***B65D 5/4608*** (2013.01); ***B65D 5/6605*** (2013.01); ***B65D 5/6608*** (2013.01)

(58) **Field of Classification Search**

CPC B65D 5/4608; B65D 5/0227; B65D 5/0281; B65D 2571/0045; B65D 5/433; B65D 2571/00524; B65D 5/10; B65D 5/22

USPC 229/117.16, 117, 117.17, 117.25, 229/117.15

See application file for complete search history.

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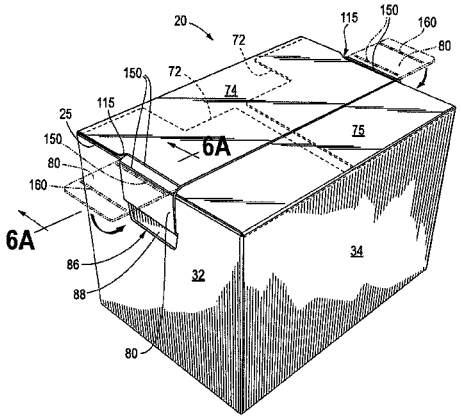
(57) **ABSTRACT**

A box having two opposed end panels having handholds, two opposed side panels, and a bottom, assembled to form a box having an opening for receiving contents therein, the box including a top panel for closing the opening, the top panel being hingedly connected to a side panel, and including a pair of closure flaps extending from the side of the top panel, the closure flaps positioned to be inserted into the handholds when the top panel is positioned to close the box.

2 Claims, 7 Drawing Sheets



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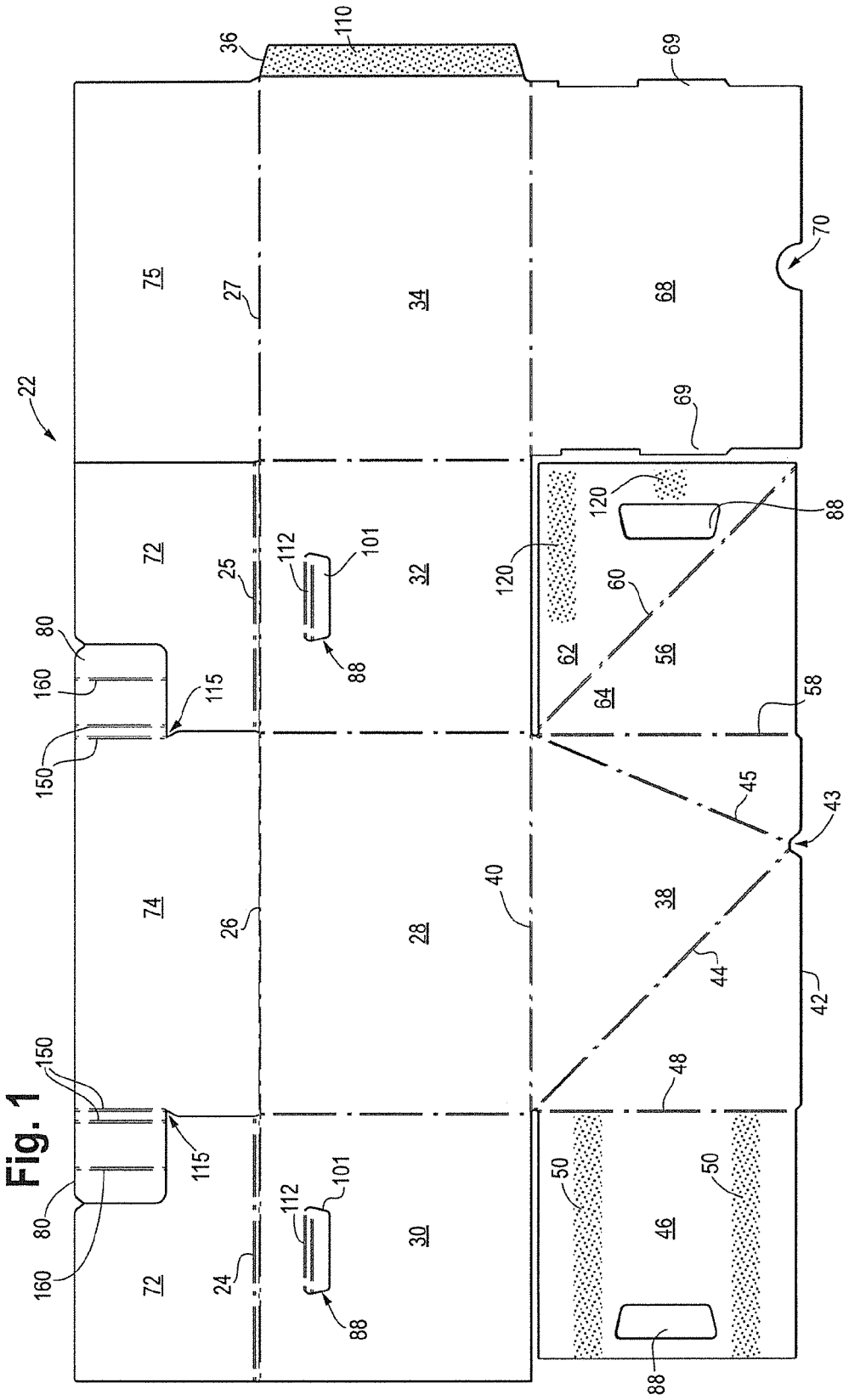
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Fig. 1

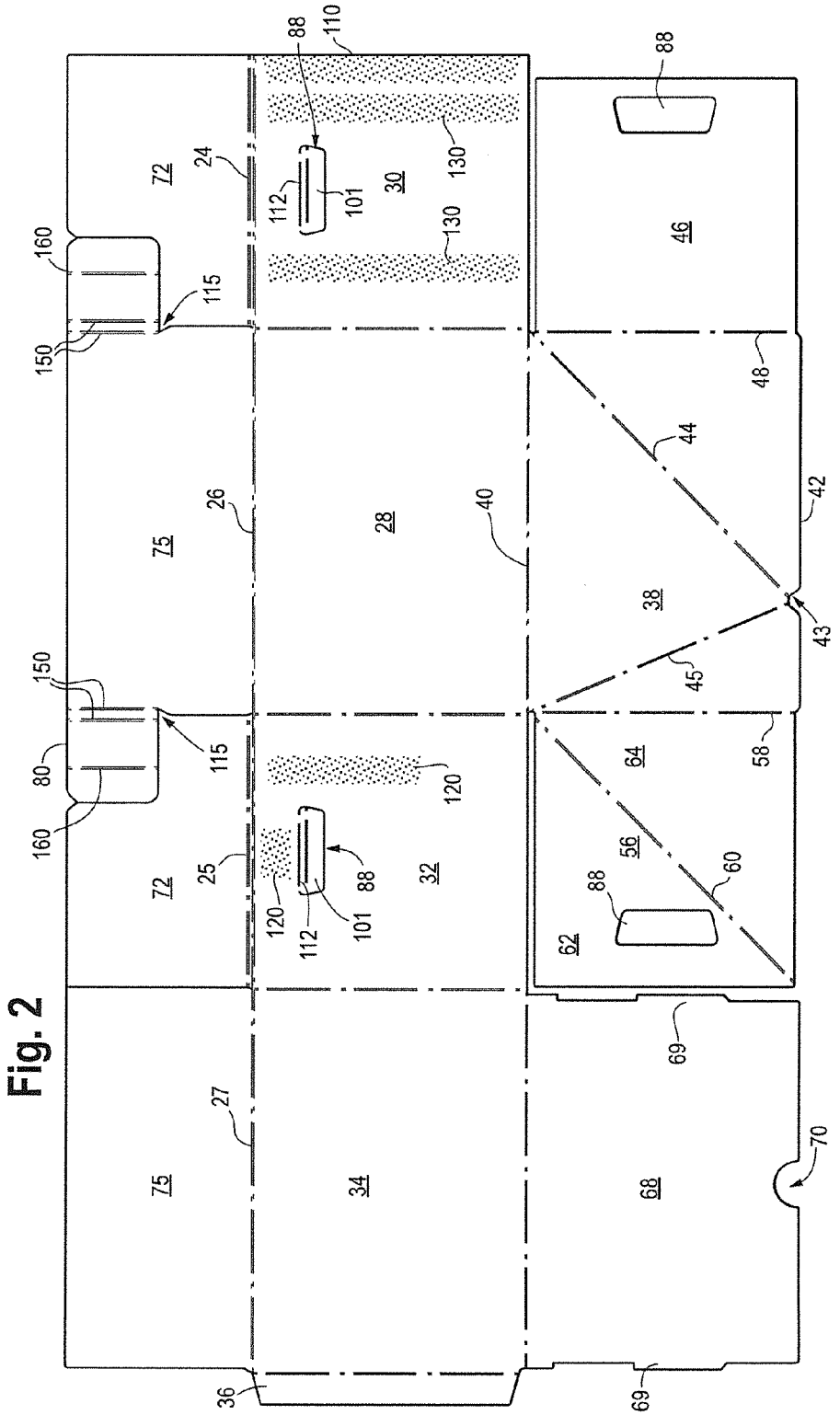
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Fig. 2

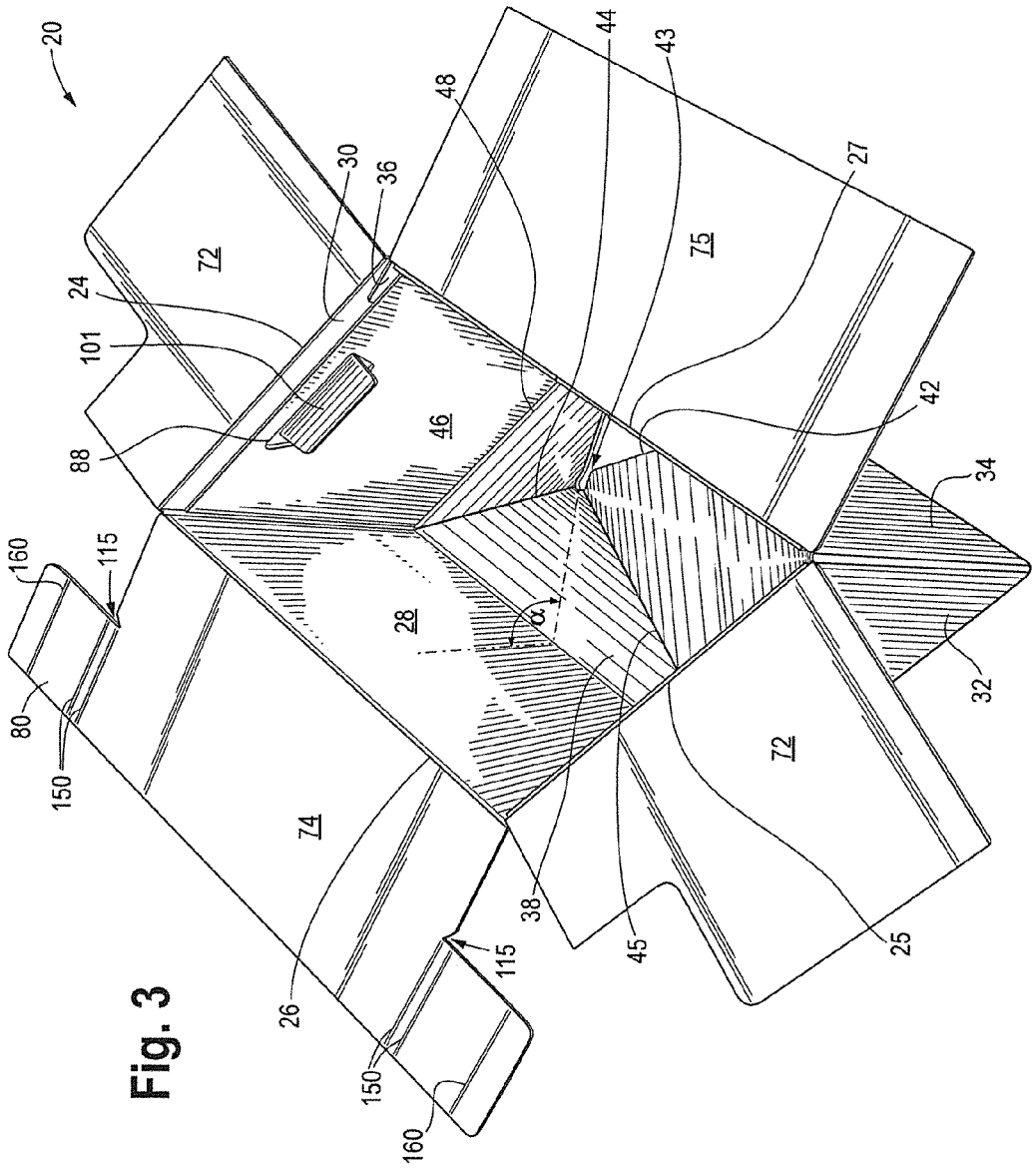
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Fig. 3

Fig. 4

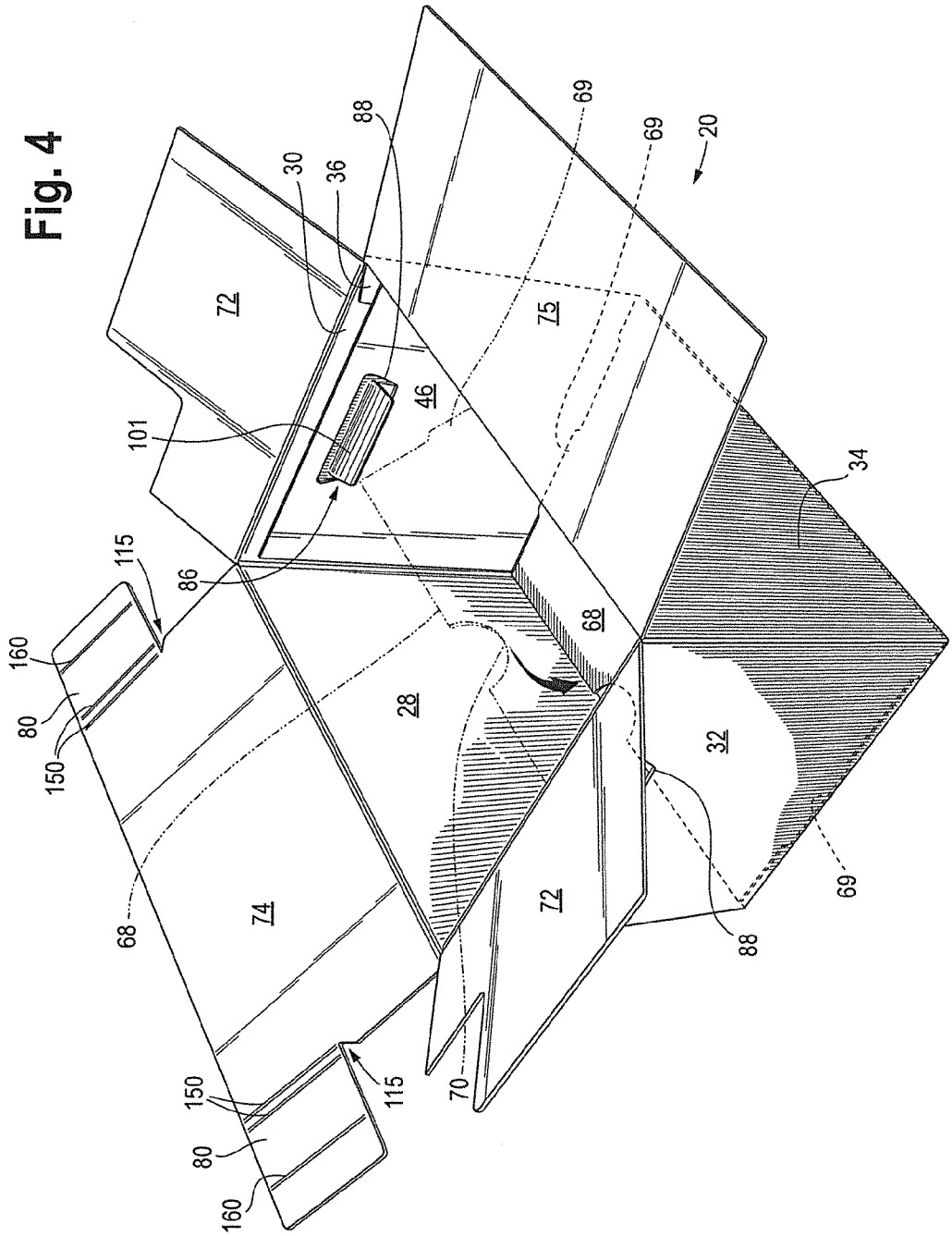
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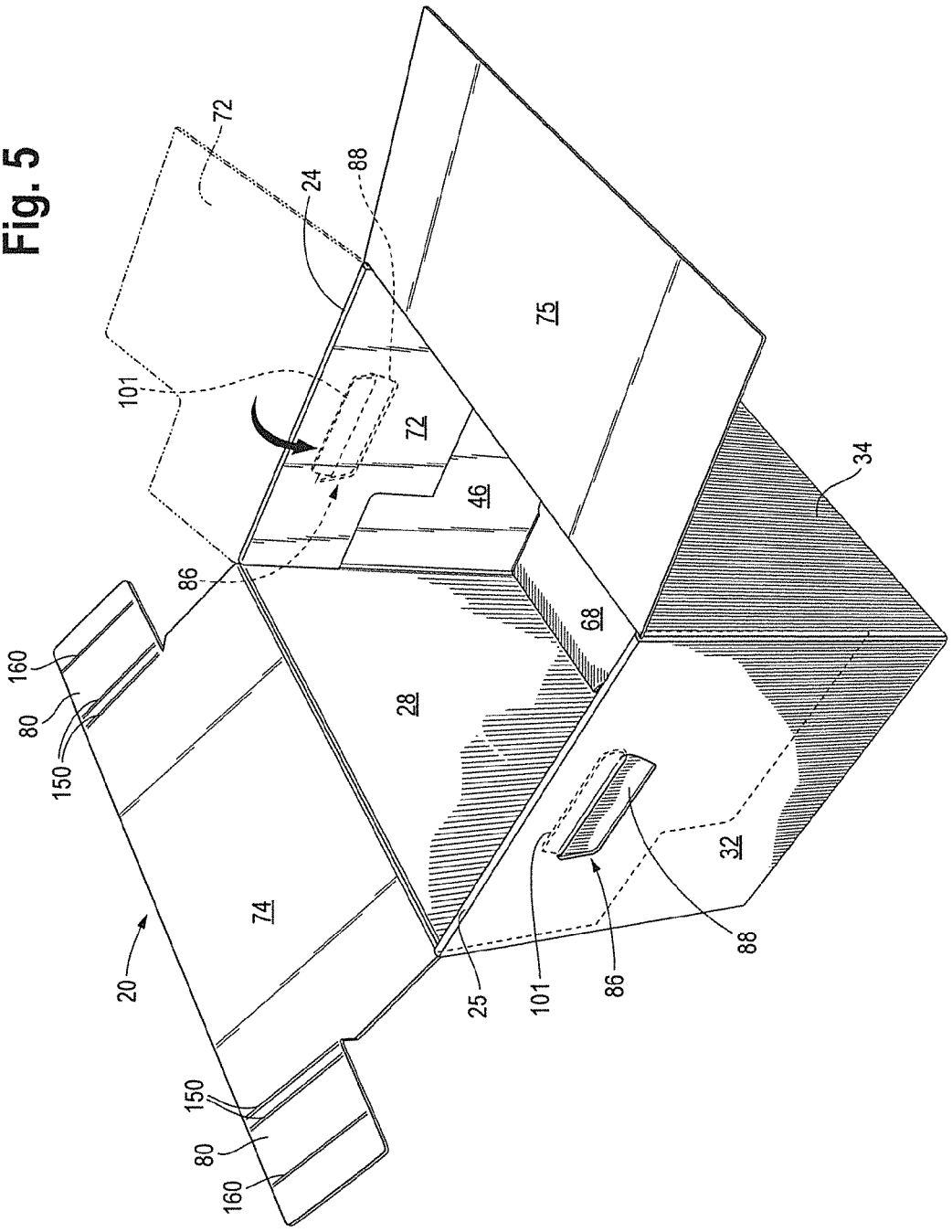
Fig. 5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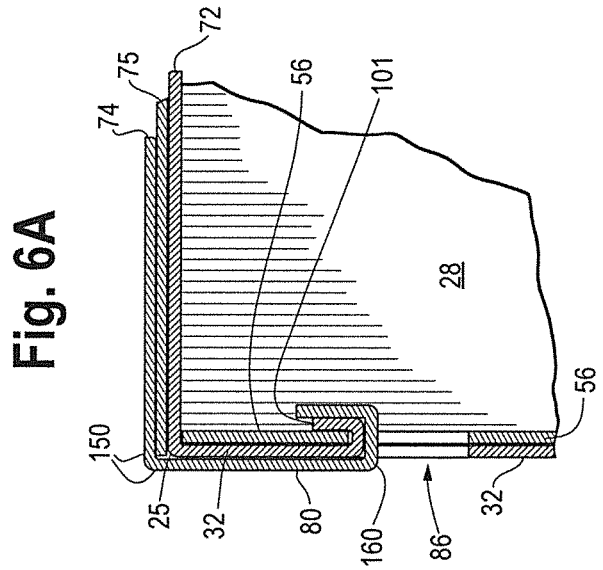
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Fig. 6A

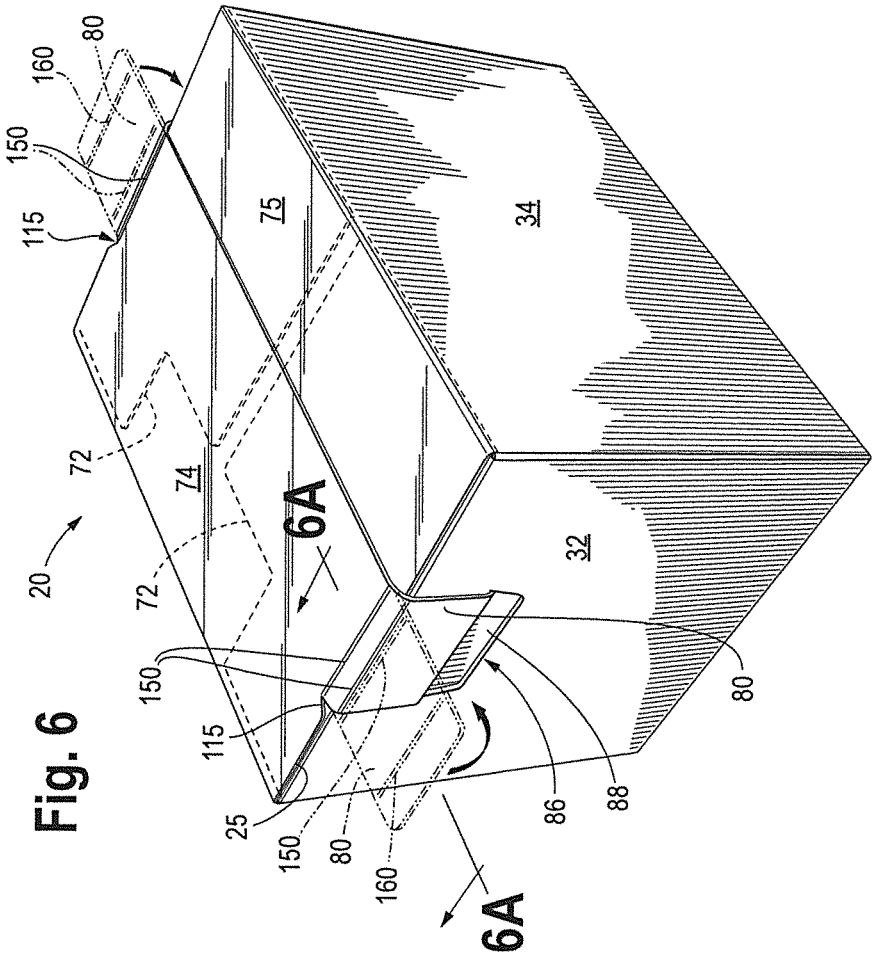
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Fig. 6

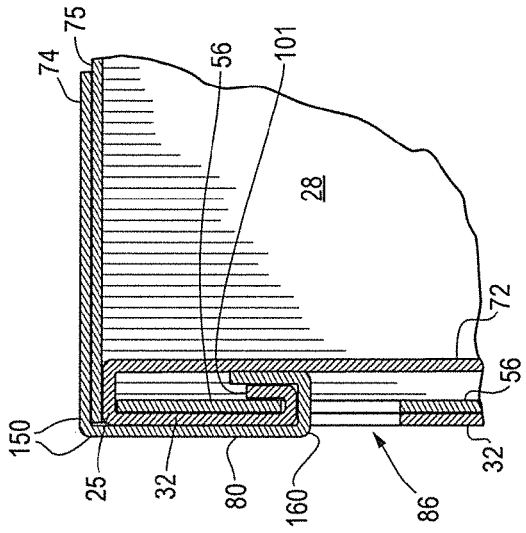
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Fig. 7A

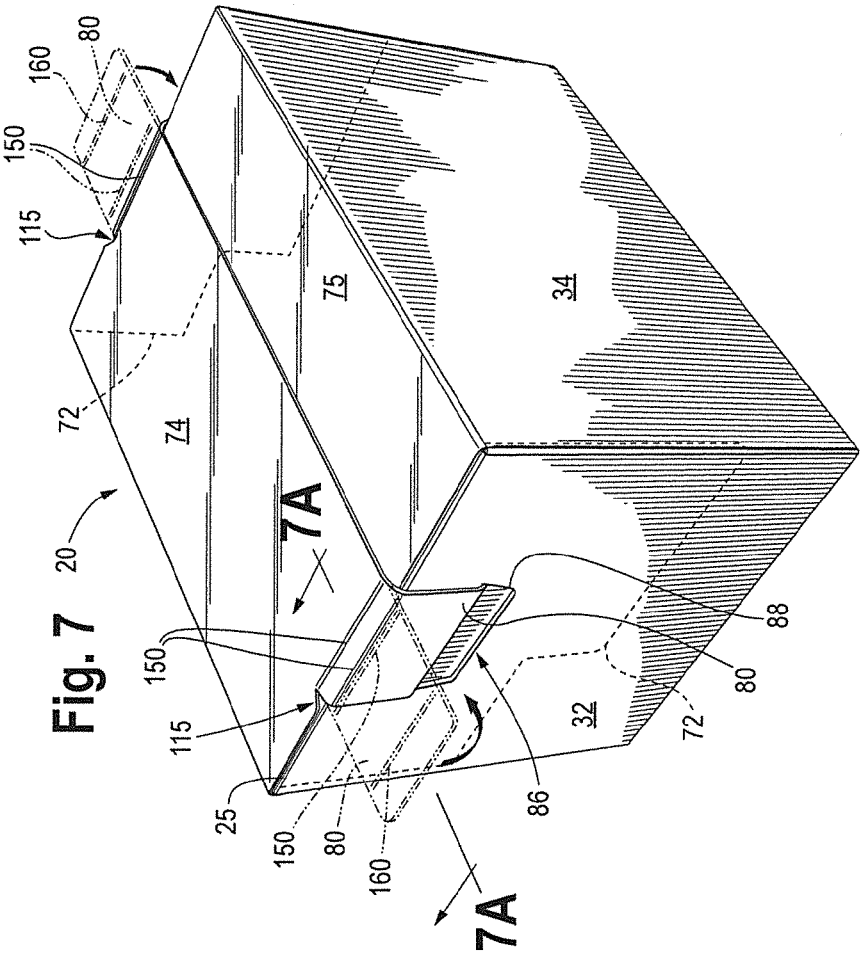
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Fig. 7

STORAGE BOX HAVING INTEGRAL LID WITH CLOSURE FLAPS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to portable containers, in particular to corrugated paperboard containers with hingedly attached panels to form a lid.

2. Background Art

Corrugated paperboard boxes provide an exceptionally rugged, economical, and adaptable container for shipment and storage of goods. Because of the multi-ply construction of corrugated paperboard, the material is extremely lightweight for its stiffness. Nonetheless, the finishing or conversion of raw paper or corrugated board into a corrugated container commonly is accomplished at a location distant from the final use of the container. Hence, to economically transport the box, it must be shipped in an unassembled or knocked-down configuration. When products are to be placed in boxes in an industrial facility, the need to mechanically assemble the container with adhesives is readily addressed. Yet many boxes are used in the field, in homes, businesses, or agricultural settings, far from the jigs and wet adhesives of the factory floor. These boxes must be capable of being assembled without the need for post-manufacture adhesives. Such folding boxes are well known in the prior art.

A particular type of folding box includes a crash or automatic bottom that deploys into position to receive contents as the user unfold the box from its storage or flat configuration to the deployed configuration where the box is ready to receive contents. These boxes employ an arrangement of flaps and panels, which, by diligent manipulation by the end user, can be more or less rapidly assembled into a finished container. What is needed is a corrugated container which can be simply and rapidly assembled, and which has adequate levels of stacking strength.

While folding containers of the prior art may include lids, it is desirable to have a lid that is attached to the box and is easily secured and unsecured for the insertion and removal of the contents of the container. The box described herein includes side top flaps or panels that include closure flaps. The closure flaps inter with the hand holds of the box to secure the side top flaps in the closed position.

It is further noted that the box lid described herein can be utilized on other types of boxes, such as boxes that require taped or glued bottoms.

SUMMARY OF THE INVENTION

The corrugated paperboard box of this invention has two side panels which are joined by parallel end panels. The box includes a bottom extending between the upright side and end panels creating a volume or space to contain articles. In the preferred embodiment, the box bottom is a crash bottom in which automatic bottom panel extends from a side panel, and has two converging reverse-scored fold lines which extend between a side panel and the outer edge of the automatic bottom panel. End flaps are folded up from the automatic bottom panel and are adhesively connected to the end panels to form double ply side walls to the box. One of the end flaps has a diagonal fold line, with portions of the flap above the diagonal fold line only being adhered to the end panel. The angles of the reverse scored fold lines are selected depending on the dimensions of the box to allow the automatic bottom panel to be deployed from a folded position alongside the side and end panels to an assembled position perpendicular to the side and end panels, simply by displacing one side panel with respect to the other. The box is hence very simple to assemble and take down, yet has desirable stiffness and stacking strength due to the multi-ply assembly of the end walls. The end panels include hand holds preferably positioned near the top of the end panels. The handholds are preferably rectangular or trapezoidal apertures in the end panels.

The box has an open top area that may be selectively open and closed by the placement and removal of a lid. In the preferred embodiment, the otherwise open box may be closed by folding two overlapping side top flaps. One of the side top flaps includes closure flaps. When the side top flaps are positioned over the open top of the box to thereby close the box, the closure flaps extend downwardly from the side top flap to the handhold apertures of the end panels. The closure flaps are inserted into the hand hold apertures and folded upwardly about the top edge of the handhold aperture, thus securing the side top flaps in the closed position, and providing protection of the user's hands from the edges of the aperture forming the handholds.

It is an object of the present invention to provide a corrugated box with a securable lid which may be rapidly assembled from a knocked-down condition and is economical to construct.

It is yet another object of the present invention to provide a corrugated reusable box which may be readily closed and opened and reclosed, without strings or adhesives.

It is a still further object of the present invention to provide a corrugated box which is conveniently closed.

It is yet another object of the present invention to provide a knocked-down corrugated paperboard container with an integral reclosable lid, which can be assembled by applying pressure to the elongated ends of the knocked-down box.

It is still another object of the present invention to provide a corrugated container with an automatic bottom having four smooth, flat outside surfaces, and smooth flat, two-ply bottom surfaces.

It is also another object of the present invention to provide an automatic bottom box having several layers of corrugated board in the end walls to facilitate strong handholds for lifting the loaded box, and to provide structure to secure closure flaps inserted into handholds in the panels forming the end walls.

It is an object of the invention to create a box having two opposed end panels having handholds, two opposed side panels, and a bottom, assembled to form a box having an opening for receiving contents therein, the box including a top panel for closing the opening, the top panel being hingedly connected to a side panel, and including a pair of closure flaps extending from the side of the top panel, the closure flaps positioned to be inserted into the handhold when the top panel is positioned to close the box. The box may further including an end top flap hingedly connected to an end panel, the end top flap positioned generally parallel to the end panel when the box is closed, a closure flap having a distal portion positioned between the end panel and the end top flap when the closure flap is inserted into the handhold.

It is an object of the invention to create a corrugated paperboard article for assembly into a box, the article comprising:

a first side panel;

a first end panel which extends sidewardly from the first side panel, the first end panel having a handhold;

a second end panel which extends sidewardly from the first side panel spaced from the first end panel, the second end panel having a handhold;

a second side panel extending between and connected to the first end panel and the second end panel;

a first side top panel hingedly attached to the first side panel, the first side top panel including a pair of closure flaps extending from lateral sides of the top panel, the closure flaps positioned to be inserted into the handholds when the top panel is positioned to close the box;

a second side top panel hingedly attached to the second side panel;

an automatic bottom panel which extends from the first side panel along a bottom fold line, the automatic bottom panel having an outer edge which is substantially parallel to the bottom fold line and which is spaced from the bottom fold line, wherein a first fold line extends from the bottom fold line to the automatic bottom panel outer edge, and wherein a second fold line extends from the bottom panel fold line to the bottom panel outer edge, such that the first fold line and the second fold line converge toward one another and terminate at the bottom panel outer edge;

a first end flap which extends from the automatic bottom panel along a first end flap fold line, a first angle being defined between the first end flap fold line and the first fold line, wherein a portion of the first end flap is adhesively connected to the first end panel, to form a multi-ply end wall; and

a second end flap which extends from the automatic bottom panel along a second end flap fold line, a second angle being defined between the second end flap fold line and the second fold line, wherein a diagonal fold line extends along the second end flap, dividing the second end flap into an upper portion which is adhesively connected to the second end panel, and a lower portion below the diagonal fold line which is not connected to the second end panel, wherein parallel sideward displacement of the first side panel with respect to the second side panel causes the article to expand into a box, with the automatic bottom panel being alternatively positioned in a collapsed position alongside and substantially parallel to the side and end panels, and an assembled position substantially perpendicular to the side and end panels.

Further objects, features and advantages of the invention will be apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a plan view of a first side of a blank used to form the box.

FIG. **2** is a plan view of a second side of a blank used to form the box.

FIG. **3** is top perspective view of a partially deployed box showing the inside of the box through the top opening and the floor partially deployed.

FIG. **4** is a top perspective view of an almost fully deployed box, showing the inner bottom panel being placed.

FIG. **5** is a top perspective view of the deployed box showing the top end panels being folded into the box and placed generally parallel to the end panels, and the flaps of material in the handholds pushed into the box and around the end flaps, positioning the flaps of material between the end flaps and the top end flaps.

FIG. **6** is a perspective view of a closed box with the top end panels in a horizontal position, showing the closure flaps in the handholds.

FIG. **6A** is a partial sectional view of the box in FIG. **6**.

FIG. **7** is a perspective view of a closed box with the top end panels in a vertical position, showing the closure flaps in the handholds.

FIG. **7A** is a partial sectional view of the box of FIG. **7**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring more particularly to the figures wherein like numbers refer to similar parts, a corrugated paperboard box **20** of this invention having an integral lid formed of hingedly attached side top flaps **74** and **75** is shown. The box **20** is formed in a knocked-down condition at the factory from a single corrugated paperboard blank **22**, shown in FIGS. **1** and **2**. The blank **22** is cut, folded, and adhesively connected such that the knocked-down article is readily expandable into a box with minimal effort by the end user and without the need for the end user to use connectors or adhesives in the final box assembly. One skilled in the art will recognize that the side top flap having closure flaps can be used on other types of boxes having four walls, a bottom, and apertures in two of the walls, and is not limited to crash bottom boxes.

For the preferred embodiment crash bottom box, the blank **22**, as shown in FIGS. **1** and. **2**, is for the fully enclosable box **20**. The blank **22** is a single thickness of conventional corrugated paperboard, having one, two, or more plies of corrugations, depending on the ultimate strength required. One skilled in the art of containers will recognize that the other types of material used to make containers, such as plastic, coated fiberboard, and cardboard, may be used to form the blank **22**. When corrugated paper board is used, it is preferred that the corrugations are positioned to run perpendicular to the fold line **26** between the first side top panel **74** and the first side panel **28**. The blank **22** is die-cut and folded to minimize waste or unutilized segments of corrugated paperboard.

The box **20** is preferably generally rectangular, and therefore the blank **22** has a rectangular first side panel **28**, with a first end panel **30** extending along a fold line on one side of the first side panel, and a second end panel **32** extending along a fold line on the other side. A second side panel **34**, of dimensions similar to the first side panel **28**, extends along a fold line from the second end panel **32**. A glue flap **36** extends from the second side panel **34** along a fold line. The glue flap **36** is adhesively connected to the interior of the first end panel **30**. The zone of adhesion is indicated by stippling **110**. It should be noted that the glue flap **36** may alternatively be connected to the exterior of the first end panel **30**. The side panels and the end panels form the vertically extending side walls of the assembled box **20**, as shown in FIGS. **3-7A**. It is preferred that the corrugations of the corrugated fiberboard run in the vertical direction in the vertically extending side walls of the assembled box **20**.

An automatic bottom panel **38** extends from the first side panel **28** along a bottom fold line **40**. The automatic bottom panel **38** is generally rectangular with a width approximately equal to the horizontal width of the side panels, and a length approximately equal to the horizontal width of the side panels. The automatic bottom panel **38** has an outer edge **42** which is spaced generally parallel from the bottom fold line **40**. A first diagonal fold line **44** extends from the bottom fold line **40** to the outer edge **42**. The first diagonal fold line **44** is preferably a reverse scored fold line, but may be formed in other ways to create a line of weakness suitable for folding. Such lines of weakness may be scored lines or

perforations. The first diagonal fold line **44** is positioned at about 45 degrees from the bottom panel fold line **40**. A second diagonal fold line **45** extends from the bottom panel fold line **40** the outer edge **42**. The second diagonal fold line **45** is preferably a reverse scored fold line, but may be formed in other ways to create a line of weakness suitable for folding. Such lines of weakness may be score lines or perforations. The first diagonal fold line **44** converges toward the second diagonal fold line **45**. It is preferred that the outer edge **42** is notched in the area where the first diagonal fold line **44** and the second diagonal fold line **45** are nearest to each other. The notch has generally curved shape to reduce the concentration of stresses. When the box **20** has side panels which are less than twice the width of the end panels, the first diagonal fold line **44** and the second diagonal fold line **45** or extensions of those lines, will meet along a unnotched extension of outer edge **42** if the outer edge **42** is notched **43**, or at outer edge **42** if the outer edge **42** is not notched. For boxes of different dimensions, the two diagonal fold lines may terminate at different positions along the outer edge. Nevertheless, the angle of the first diagonal fold line **44** will always be about 45 degrees.

A generally rectangular first end flap **46** extends from the automatic bottom panel **38** along a first end flap fold line **48**. A first angle is defined between the first end flap fold line **48** and the first diagonal fold line **44**. An attachment region **50**, indicated in FIGS. **1** and **2** by a stippling pattern, is defined on the exterior face of the first end flap **46**. In manufacture of the box **20**, adhesive is applied to the attachment region **50** and the first end flap **46** is glued to the first end panel **30** to form a multi-ply end wall **52**. The zone of contact where the adhesive is applied is shown as stippling **130**. In alternate embodiments, the entire surfaces of the end flaps which do not move with respect to the end panels may be adhered together.

A generally rectangular second end flap **56** extends from the automatic bottom panel **38** along a second end flap fold line **58**. A second angle of approximately 45 degrees is defined between the second end flap fold line **58** and the second fold line **45** on the automatic bottom panel **38**. In order for the automatic bottom panel **38** to be free to collapse, the second end flap **56** cannot be fully connected to the second end panel **32**. The second end flap **56** is therefore formed with an end flap diagonal fold line **60** which extends at a 45 degree angle from the bottom edge of the flap along the second end flap from a point adjacent the intersection of the second diagonal fold line **45** and the bottom fold line **40**. The end flap diagonal fold line **60** thus divides the second end flap **56** into an upper portion **62** which is adhesively connected to the second end panel **32**, and a lower portion **64** below the diagonal fold line which is not connected to the second end panel. Adhesive is applied to the exterior face of the upper portion **62** of the second end flap **56** and brought into contact with the second end panel to connect the second end flap to the second end panel and create a second multi-ply end wall **66**. The zones of contact created by the adhesive are shown by stippling **120**. The end flaps **46**, **56**, extend the full depth of the box to better contribute to the stacking strength of the box.

The automatic bottom panel, fixed to one end panel, and fixed along a diagonal fold line to the other panel, may thus be extended between a collapsed position alongside and substantially parallel to the side and end panels, and an assembled position substantially perpendicular to the side and end panels. As shown in FIGS. **3-7**A, this transformation of the finished blank from a compact, flat, corrugated assembly, to a dimensional storage box is effected by displacing the first side panel with respect to the second side panel, by, for example, gripping the flat assembly at the corners and applying pressure towards the interior of the assembly. This manipulation causes the article to expand into a box.

An interior bottom panel **68** extends along a fold line from the second side panel **34**. The interior bottom panel **68** has approximately the same dimensions at the automatic bottom panel **38**, and, in the knocked-down position, lies adjacent and between the folded side panels **28**, **34**. After the box **20** has been expanded so that the automatic bottom panel **38** forms the horizontal bottom of the box, the interior bottom panel **68** is pivoted downwardly to overlie the automatic bottom panel and there defines a flat, uncreased bottom to the box, as shown in FIG. **4**. The interior bottom panel **68** may include tabs **69** along the end edges to secure the interior bottom panel **68** in position by causing friction with the end flaps **46** and **56**. To facilitate collapsing of the box **20** subsequent to assembly, the interior bottom panel may be provided with a finger opening cut-out **70** along its perimeter to permit a user to reach beneath the interior bottom panel, and fold it back along the second side panel **34**, thereby permitting the box to be collapsed by applying upward pressure on the automatic bottom panel **38**.

The box **20** described herein is provided with a convenient closure to close, cover, or seal the box **20** and protect or contain the contents. As shown in FIGS. **1** and **2**, an end top flap **72** extends upwardly from each end panel **32**, **34**. The end top flaps **72** are sized slightly narrower in width (width for the end panels being the direction of the double fold lines **24** and **25**) than the end panels **32** and **34** to allow for the end top flaps **72** to be folded into the open box about double fold lines **24** and **25** so that the end top flaps **72** rest nearly parallel to the end panels **32** and **34**. In such a position, the end top flaps **72** are generally vertical. Such an arrangement is not necessary, but has the benefit of strengthening the box and can provide force against the closure flaps **80** when the closure flaps **80** are inserted in the handholds **86**. In an alternate arrangement, the end top flaps **72** are folded about the double fold lines **24** and **25** so that they rest horizontally or are generally perpendicular to the end panels **32** and **34** to cover at least a portion of the opening of the box.

A first side top flap **74** extends from the first side panel **28**. A second side top flap **75** extends from the second side panel **34**. The first side top flap **74** height is generally is greater than one half the width of the box **20**. The second side top flap **75** is generally of the same height due to the economies of maximizing the material used for the blank, but need not be the same size. The height of the side top flaps **74** and **75** is the dimension perpendicular to fold line **26**. Thus, when the side top flaps **74** are folded down to form a cover or lid for the otherwise open box **20**, as shown in FIGS. **6** and **7**, the first and second side top flaps **74** and **75** lie one atop the other, with the first side top flap **74** being positioned on the outside of the box **20**, forming an exterior surface of the box **20**.

The box **20** is provided with handholds **86** for convenient lifting and transporting of the box. A handhold **86** is defined in each end wall **52**, **66**, by aligned apertures **88** in the end panels **30**, **32** and the end flaps **46**, **56**. It is preferred that the apertures **88** in the end flaps are slightly larger than the apertures **88** in the end panels **30** and **32**. It is also preferred that the handholds **86** in the end panels **30** and **32** each include a flap of material **101** hingedly attached to the end panel. The flap of material **101** is created by die cutting the aperture **88** in each end panel **30** and **32** about only part of

the perimeter of each aperture **88**. Preferably, the top portion of the perimeter is not cut, thereby creating a flap of material **101** that can be pushed through the apertures in both the end panels and the end walls. In the preferred embodiment, the top portion of the perimeter is defined by double fold lines **112**. When the user desires to use the handholds **86**, he pushes the flap of material **101** into the aperture **88**. The flap of material **101** provides a more comfortable experience from the user as the flap of material shields the users hands from the top edge of the apertures **88**. In the embodiment where the end panel top flaps **72** are folded nearly parallel to the end panels **30** and **32**, the flap of material **101** is folded upward once pushed into the apertures of the end panel and the end flap so as to rest between the end panel top flap **72** and the end flaps **46** or **56**, as shown in FIG. **6**A. Because the handholds **86** are formed in double thicknesses of corrugated paperboard and also include the flaps of material **101**, the box is better able to support the loads imposed by lifting at the handholds.

As shown in the FIGS. **1** and **2**, the first side top flap **74** has a sidewardly extending closure flap **80** on each lateral side of the first side top flap **74**. The material for the closure flaps **80** is preferably provided by making the side edge die cut non linear and cutting material out of what would otherwise be a rectangular end top flap **72**. Because the closure flaps **80** extend sidewardly, rather than upwardly, they do not extend the height of folded article when it is in its collapsed configuration. It is preferable that the first side top panel **74** include stress relief notches **115** where the closure flaps **80** meet the side edges of the first side top panel **74**.

The closure flaps **80** are sized so that their width (where width is the direction parallel to fold line **27**) is slightly larger than the width of the upper portion of the aperture **88** in the end panel **30** or **32** forming the handholds **86**. The closure flaps **80** are of sufficient length to reach to at least the top of the handholds **86** when the first top side flap **74** is placed over the top of the box **20** in a closed position, as shown in FIGS. **6** and **7**. It is preferable that the length of the closure flaps **80** is sufficient to reach to the bottom of the handhold **86** apertures **88** in the end panels **30** and **32**.

In use, the closure flaps **80** are pushed in to the apertures **88** of the handholds **86** and folded upwards when the user lifts the box **20** by the hand holds **86** as shown in FIGS. **6**-**7**A. It is preferable that the closure flaps are retained in the handholds **86** by friction between the closure flaps **80** and the sides of the apertures **88**. This occurs because the closure flaps **80** are slightly wider in width than the apertures **88** of the end panels **30** and **32**. The closure flaps **80** can include fold lines to allow the closure flaps to bend around the panels as shown in FIGS. **6**A and **7**A. In the blank **22** shown in FIGS. **1** and **2**, each closure flap has a first double fold line **150** nearest the first top side panel **74**, and a second fold line **160** distal there from. The second fold line **160** is positioned to lie where the closure flap **80** bends to enter the handhold. Thus the distance between the first double fold line **150** and the second fold line **160** is the distance between the top of the handhold **86** and the top edge of the end panel **30** or **32**. One skilled in the art will recognize that the first double fold line **150** and the second fold line **160** optional when the corrugations of the material used to form the blank run parallel to those lines, thereby easily allowing folding along the corrugations.

It should be noted that the fold lines which have been discussed above as fold lines or score lines, may also be perf rolled, or otherwise treated to permit folding of portions of the box **20** in the directions desired.

It is understood that the invention is not limited to the particular construction and arrangement of parts herein illustrated and described, but embraces such modified forms thereof as come within the scope of the following claims.

The invention claimed is:

1. A box having two opposed end panels each having handholds, two opposed side panels, and a bottom, assembled to form a box having an opening for receiving contents therein, the box including a top panel for closing the opening, the top panel being hingedly connected to a side panel, and including a pair of closure flaps extending from lateral sides of the top panel, the closure flaps positioned to be inserted into the handholds when the top panel is positioned to close the box, wherein the bottom of the box is a crash bottom, the crash bottom including an automatic bottom panel which extends from a first side panel selected from the opposed side panels, the automatic bottom panel extending along a first bottom fold line, the automatic bottom panel having an outer edge which is substantially parallel to the first bottom fold line and which is spaced from the first bottom fold line, wherein a first fold line extends from the first bottom fold line to the automatic bottom panel outer edge, and wherein a second fold line extends from the first bottom panel fold line to the bottom panel outer edge, such that the first fold line and the second fold line converge toward one another and terminate at the bottom panel outer edge; and an interior bottom panel which extends from a second side panel selected from the opposed side panels, the interior bottom panel extending along a second bottom fold line, the interior bottom panel having lateral edges generally perpendicular to the second bottom fold line, the lateral edges including tabs that extend beyond the lateral edges.

2. A corrugated paperboard article for assembly into a box, the article comprising:

a first side panel;

a first end panel which extends sidewardly from the first side panel, the first end panel having a handhold;

a second end panel which extends sidewardly from the first side panel spaced from the first end panel, the second end panel having a handhold;

a second side panel extending between and connected to the first end panel and the second end panel;

a first side top panel hingedly attached to the first side panel, the first side top panel including a pair of closure flaps extending from lateral sides of the top panel, the closure flaps positioned to be inserted into the handholds when the top panel is positioned to close the box;

a second side top panel hingedly attached to the second side panel;

an automatic bottom panel which extends from the first side panel along a bottom fold line, the automatic bottom panel having an outer edge which is substantially parallel to the bottom fold line and which is spaced from the bottom fold line, wherein a first fold line extends from the bottom fold line to the automatic bottom panel outer edge, and wherein a second fold line extends from the bottom panel fold line to the bottom panel outer edge, such that the first fold line and the second fold line converge toward one another and terminate at the bottom panel outer edge;

a first end flap which extends from the automatic bottom panel along a first end flap fold line, a first angle being defined between the first end flap fold line and the first fold line, wherein a portion of the first end flap is adhesively connected to the first end panel, to form a multi-ply end wall; and

a second end flap which extends from the automatic bottom panel along a second end flap fold line, a second angle being defined between the second end flap fold line and the second fold line, wherein a diagonal fold line extends along the second end flap, dividing the second end flap into an upper portion which is adhesively connected to the second end panel, and a lower portion below the diagonal fold line which is not connected to the second end panel, wherein parallel sideward displacement of the first side panel with respect to the second side panel causes the article to expand into a box, with the automatic bottom panel being alternatively positioned in a collapsed position alongside and substantially parallel to the side and end panels, and an assembled position substantially perpendicular to the side and end panels, the box further including an interior bottom panel which extends from the second side panel, the interior bottom panel extending along a second bottom fold line, the interior bottom panel having lateral edges generally perpendicular to the second bottom fold line, the lateral edges including tabs that extend beyond the lateral edges.

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